Sequence Listing

<110> Baker, Kevin Botstein, David Eaton, Dan Ferrara, Napoleone Filvaroff, Ellen Gerritsen, Mary Goddard, Audrey Godowski, Paul Grimaldi, Christopher Gurney, Austin Hillan, Kenneth Kljavin, Ivar Napier, Mary Roy, Margaret Tumas, Daniel Wood, William

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Phe Gly Cys Gln Cys Tyr Ser Arg Val Val His Cys Ser Asp Leu 80 85 90

Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met
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Leu Arg Arg Leu Tyr Leu Ser His Asn Gln Leu Ser Glu Ile Pro 155 160 165

Leu Asn Leu Pro Lys Ser Leu Ala Glu Leu Arg Ile His Glu Asn 170 175 180

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Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr

Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu

Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn

Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His

Gly Asn Cys Ser Ser Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

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Leu	Pro	Ser	Leu	Pro 140	Ala	Thr	Gly	Trp	Thr 145	Glu	Ser	Met	Ala	Pro 150
Arg	Gln	Leu	Gln	Pro 155	Val	Pro	Ala	Thr	Gln 160	Glu	Pro	Asp	Lys	Ile 165
Leu	Pro	Arg	Ser	Gln 170	Ala	Thr	Val	Thr	Leu 175	Pro	Thr	Trp	Gln	Pro 180
Lys	Thr	Gly	Gln	Lys 185	Val	Val	Glu	Met	Lys 190	Trp	Asp	Gln	Val	Glu 195
Val	Ile	Pro	Asp	Ile 200	Ala	Cys	Gly	Asn	Ala 205	Ser	Ser	Asn	Ser	Ser 210
Ala	Gly	Gly	Arg	Leu 215	Val	Ser	Phe	Glu	Val 220	Pro	Gln	Asn	Thr	Ser 225
Val	Lys	Ile	Arg	Gln 230	Asp	Ala	Thr	Ala	Ser 235	Leu	Ile	Leu	Leu	Trp 240
Lys	Val	Thr	Ala	Thr 245	Gly	Phe	Gln	Gln	Cys 250	Ser	Leu	Ile	Asp	Gly 255
Arg	Ser	Val	Thr	Pro 260		Gln	Ala	Ser	Gly 265		Leu	Val	Leu	Leu 270
Glu	Glu	Met	Leu	Ala 275		Gly	Asn	Asn	His 280		Ile	Gly	Phe	Val 285
Asn	Asp	Ser	Val	Thr 290		Ser	Ile	Val	Ala 295	Leu	Arg	Leu	Thr	Leu 300
Val	Val	Lys	Val	Ser 305		Cys	Val	Pro	Gly 310		Ser	His	Ala	Asn 315
Asp	Leu	Glu	Cys	Ser 320	Gly	Lys	Gly	Lys	Cys 325	Thr	Thr	Lys	Pro	Ser 330
Glu	Ala	Thr	Phe	Ser 335		Thr	Cys	Glu	340		туг	· Val	Gly	Thr 345
Phe	Cys	Glu	Glu	350		Ala	Cys	Gln	355		Pro	суя	s Glr	Asn 360
Asn	Ala	Ser	Cys	365		Ala	Asn	Glu	Lys 370		a Asp	Gly	/ Ser	375
Phe	Thr	Cys	s Val	. Cys		Pro	Gly	Tyr	Th: 385	Gly	/ Glu	ı Lev	ı Cys	390
Ser	Lys	: Ile	e Asp	395		: Ile	Leu	a Asp	9 Pro		s Arg	g Ası	n Gly	/ Ala 405

Thr Cys Ile Ser Ser Leu Ser Gly Phe Thr Cys Gln Cys Pro Glu Gly Tyr Phe Gly Ser Ala Cys Glu Glu Lys Val Asp Pro Cys Ala Ser Ser Pro Cys Gln Asn Asn Gly Thr Cys Tyr Val Asp Gly Val His Phe Thr Cys Asn Cys Ser Pro Gly Phe Thr Gly Pro Thr Cys 455 Ala Gln Leu Ile Asp Phe Cys Ala Leu Ser Pro Cys Ala His Gly Thr Cys Arg Ser Val Gly Thr Ser Tyr Lys Cys Leu Cys Asp Pro Gly Tyr His Gly Leu Tyr Cys Glu Glu Glu Tyr Asn Glu Cys Leu Ser Ala Pro Cys Leu Asn Ala Ala Thr Cys Arg Asp Leu Val Asn Gly Tyr Glu Cys Val Cys Leu Ala Glu Tyr Lys Gly Thr His Cys Glu Leu Tyr Lys Asp Pro Cys Ala Asn Val Ser Cys Leu Asn Gly Ala Thr Cys Asp Ser Asp Gly Leu Asn Gly Thr Cys Ile Cys Ala Pro Gly Phe Thr Gly Glu Glu Cys Asp Ile Asp Ile Asn Glu Cys Asp Ser Asn Pro Cys His His Gly Gly Ser Cys Leu Asp Gln Pro Asn Gly Tyr Asn Cys His Cys Pro His Gly Trp Val Gly Ala Asn 610 Cys Glu Ile His Leu Gln Trp Lys Ser Gly His Met Ala Glu Ser 625 Leu Thr Asn Met Pro Arg His Ser Leu Tyr Ile Ile Gly Ala Leu Cys Val Ala Phe Ile Leu Met Leu Ile Ile Leu Ile Val Gly 660 Ile Cys Arg Ile Ser Arg Ile Glu Tyr Gln Gly Ser Ser Arg Pro Ala Tyr Glu Glu Phe Tyr Asn Cys Arg Ser Ile Asp Ser Glu Phe 690 680 Ser Asn Ala Ile Ala Ser Ile Arg His Ala Arg Phe Gly Lys Lys 695 700 705

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<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

or or

Ø

Ш

<223> Synthetic Oligonucleotide Probe

<400> 17

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<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

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   aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150
   tetgtgaeta agtetattgt ggetttgege ttaaetetgg tggtgaaggt 200
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Pro Leu Val Asp Gly His Ser Leu Asp Arg Leu Arg Asp Leu Arg Gln Asp Gln Asp Gln Asp Arg Asp Phe 30

Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly 70

Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg 90

Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Glu Leu Glu Leu Val Thr Ser Ala Lys 120

Ala Leu Asn Asp Thr Gln Lys Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe 150

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Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn

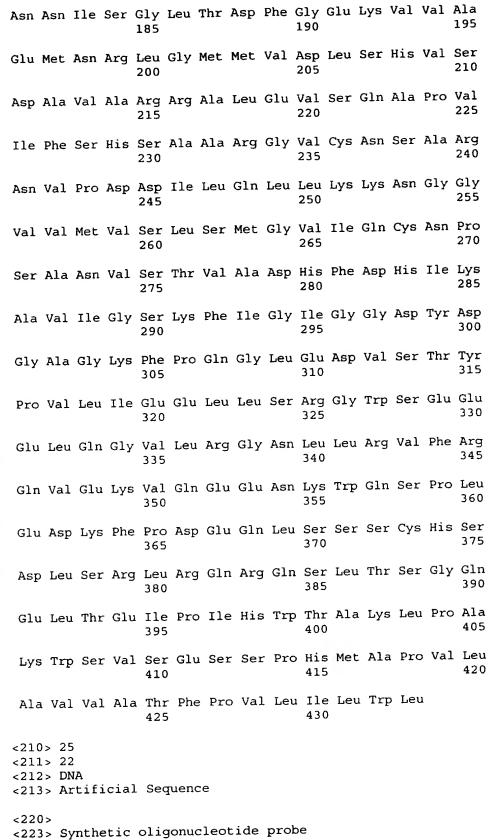
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155

170

175

165



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Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

					50					55					60
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Ala	Gln	Phe	e 1	rp	Ser 80	Ala	Tyr	Val	Pro	Cys 85	Gln	Thr	Gln	Asp	Arg 90
Asp	Ala	Le	ı /	Arg	Leu 95	Thr	Leu	Glu	Gln	Ile 100	Asp	Leu	Ile	Arg	Arg 105
Met	Cys	Ala	а :	Ser	Tyr 110	Ser	Glu	Leu	Glu	Leu 115	Val	Thr	Ser	Ala	Lys 120
Ala	Leu	As	n.	Asp	Thr 125	Gln	Lys	Leu	Ala	Cys 130	Leu	Ile	Gly	Val	Glu 135
Gly	Gly	Hi	S	Ser	Leu 140	Asp	Asn	Ser	Leu	Ser 145	Ile	Leu	Arg	Thr	Phe 150
Tyr	Met	Le	u	Gly	Val 155	Arg	Tyr	Leu	Thr	Leu 160	Thr	His	Thr	Cys	Asn 165
Thr	Pro	Tr	p	Ala	Glu 170	Ser	Ser	Ala	Lys	Gly 175	Val	His	Ser	Phe	Tyr 180
Asn	Asn	ıll	e	Ser	Gly 185		Thr	Asp	Phe	Gly 190	Glu	Lys	Val	Val	Ala 195
Glu	Met	. As	n	Arg	Leu 200		Met	Met	Val	Asp 205	Leu	Ser	His	Val	Ser 210
Asp	Ala	ı Va	1	Ala	Arg 215		Ala	Leu	Glu	Val 220	Ser	Gln	Ala	Pro	Val 225
Ile	Phe	e Se	er	His	Ser 230		Alā	a Arc	g Gly	v Val 235	Cys	Asn	Ser	Ala	Arg 240
Asr	ı Val	l Pı	0	Asp	Asp 245		e Lev	ı Glr	ı Leı	1 Let 250	ı Lys	Lys	s Asr	n Gly	Gly 255
Va2	l Va	l Me	et	Val	Ser 260	Let	ı Ser	r Met	: Gly	7 Va: 26	l Ile 5	e Glr	ı Cys	s Asr	270
Se	r Al	a A	sn	Val	Ser 275		r Vai	l Ala	a Asp	280	s Phe O	e Asp) His	; Ile	285
Ala	a Va	1 I	le	Gly	290		s Ph	e Ile	e Gly	y Il 29	e Gly 5	y Gly	y As	р Ту	Asp 300
Gl	y Al	a G	ly	Lys	30!		o Gl	n Gl	y Le	u Gl 31	u Asj 0	o Va	l Se	r Th	7 Tyr
Pr	o Va	1 L	eu	Ile	32	u Gl	u Le	u Le	u Se	r Ar 32	g Gl:	y Tr	p Se	r Gl	u Gli 330
Gl	u Le	u G	ln	Gly	y Va 33		u Ar	g Gl	y As	n Le 34	u Le	u Ar	g Va	l Ph	e Ar

Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Cys His Ser Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln 385 Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala 395 Lys Trp Ser Val Ser Glu Ser Ser Pro His Pro Asp Lys Thr His 410 Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr

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Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro

Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys

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Trp	Thr	Leu	Asn	Gly 80	Arg	Arg	Leu	Pro	Pro 85	Glu	Leu	Ser	Arg	Val 90
Leu	Asn	Ala	Ser	Thr 95	Leu	Ala	Leu	Ala	Leu 100	Ala	Asn	Leu	Asn	Gly 105
Ser	Arg	Gln	Arg	Ser 110	Gly	Asp	Asn	Leu	Val 115	Cys	His	Ala	Arg	Asp 120
Gly	Ser	Ile	Leu	Ala 125	Gly	Ser	Cys	Leu	Tyr 130	Val	Gly	Leu	Pro	Pro 135
Glu	Lys	Pro	Val	Asn 140	Ile	Ser	Cys	Trp	Ser 145	Lys	Asn	Met	Lys	Asp 150
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His	Ile	Pro	b Lys	200		Ala	Leu	Phe	Thr 205	Pro	Tyr	Glu	Ile	Trp 210
Val	. Glu	ı Ala	a Thi	215	Arg	Leu	Gly	Ser	Ala 220	Arg	Ser	Asp	Val	Leu 225
Thr	: Le	ı Ası	p Ile	230		Val	Val	Thr	Thr 235	Asp	Pro	Pro	Pro	240
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Arg	g Tr	p Va	l Se	r Pro 260	Pro	Ala	Let	ı Lys	Asp 265	Phe	e Lev	ı Phe	e Glr	1 Ala 270
Lys	з Ту	r Gl	n Il	e Arg 27	д Туг 5	Arg	y Val	l Glu	280	Ser O	val	l Asp	o Tri	285
Va:	l Va	l As	p As	p Va:		r Ası	n Gli	n Thi	c Se: 29!	r Cys 5	s Arg	g Let	ı Ala	a Gly 300
Le	u Ly	s Pr	o Gl	y Th: 30	r Val	1 Ту	r Ph	e Va	1 Gl: 31	n Vai	l Arg	g Cy:	s As	n Pro 315
Ph	e Gl	y Il	е Ту	r Gl 32		r Ly:	s Ly	s Ala	a Gl; 32	y Ile 5	e Tr	p Se	r Gl	u Trp 330
Se	r Hi	s Pr	o Th	r Al 33	a Al 5	a Se	r Th	r Pr	o Ar 34	g Se	r Gl	u Ar	g Pr	o Gly 345
Pr	o Gl	y Gl	.y Gl	y Al	а Су	s Gl	u Pr	o Ar	g Gl	y Gl	y Gl	u Pr	o Se	r Ser

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Lys His Ala Tyr	Cys Ser 1	Asn Leu	Ser Phe 385	Arg Leu	Tyr Asp	Gln 390						
Trp Arg Ala Trp	Met Gln 1	Lys Ser	His Lys	Thr Arg	Asn Gln	Asp 405						
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TODENO. +BAEHPRO

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Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly $35 \cdot 40$ 45

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Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu 65 70 75

Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe 80 85 90

Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys 95 100 105

Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn 110 115 120

Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro 125 130 135

Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp 140 145 150

Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly
155 160 165

His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro 170 175 180

Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe

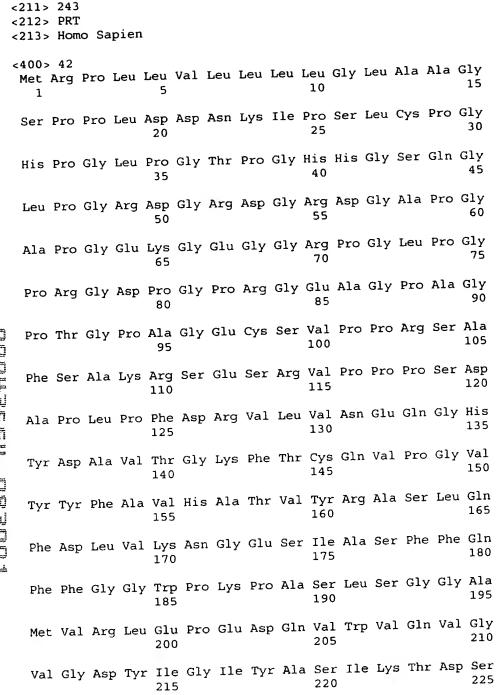
His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

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Ile Lys Asn Pro	Ser Thr Ser	Leu Gly Pro 235	Thr Leu Glu	Pro Glu 240					
Glu Val Val Asn	Arg Leu Met 245	His Gly Ile 250	Leu Thr Glu	Gln Lys 255					
Met Ile Phe Ile	Pro Ser Ser 260	Ile Ala Phe 265	Leu Thr Thr	Leu Glu 270					
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Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser 50 55 60

Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
70
75

Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly 80 85 90

Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln 95 100 105

Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

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His	Leu	Cys	Ser	Ala 170	Gly	Gln	Thr	Ala	Ile 175	Glu	Ala	Phe	Val	Cys 180
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Arg	Leu	Asn	Ile	Ser 245		Cys	His	Cys	His 250	Сув	Pro	Pro	Gly	Tyr 255
Thr	Gly	Arg	Tyr	Cys 260		Val	Arg	Cys	Ser 265	Leu	Gln	Cys	Val	His 270
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Туг	Gly	gly,	Ala	Glr 290		: Ala	Thr	Lys	Val 295	His	: Phe	e Pro) Phe	His 300
Thi	Cys	s Asp	Lev	305		Asp	Gly	Asp	310	s Phe	e Met	: Val	Ser	Ser 315
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Le	u Ala	a Phe	е Ту	r Lei 35		y Arg	g Lei	ı Glu	359	r Th:	r Ası	n Gli	u Val	360
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Ly	s Th	r Ala	a Ly:	s As		r Phe	e Ar	g Trj	p Ala 38	a T h 5	r Gl	y Gl	u Hi:	s Gln 390
Al	a Ph	e Th	r Se	r Ph 39		a Ph	e Gl	y Gl	n Pr	o As O	p As	n Hi	s Gl	y Leu 405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu 415 410 Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr 425 Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg Trp Gly Pro Gly Ser 455 <210> 51 <211> 24 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 51 aggaacttct ggatcgggct cacc 24 **a** <210> 52 <211> 24 <212> DNA <213> Artificial Sequence **山** <220> 面 <223> Synthetic oligonucleotide probe <400> 52 gggtctgggc caggtggaag agag 24 <210> 53 <211> 45 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 53 gccaaggact cetteegetg ggccacaggg gagcaccagg cette 45 <210> 54 <211> 2331 <212> DNA <213> Homo Sapien <400> 54 eggacgegtg ggetgggege tgcaaagegt gteecegegg gteecegage 50 gtcccgcgcc ctcgccccgc catgctcctg ctgctggggc tgtgcctggg 100 gctgtccctg tgtgtggggt cgcaggaaga ggcgcagagc tggggccact 150 cttcggagca ggatggactc agggtcccga ggcaagtcag actgttgcag 200

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Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu

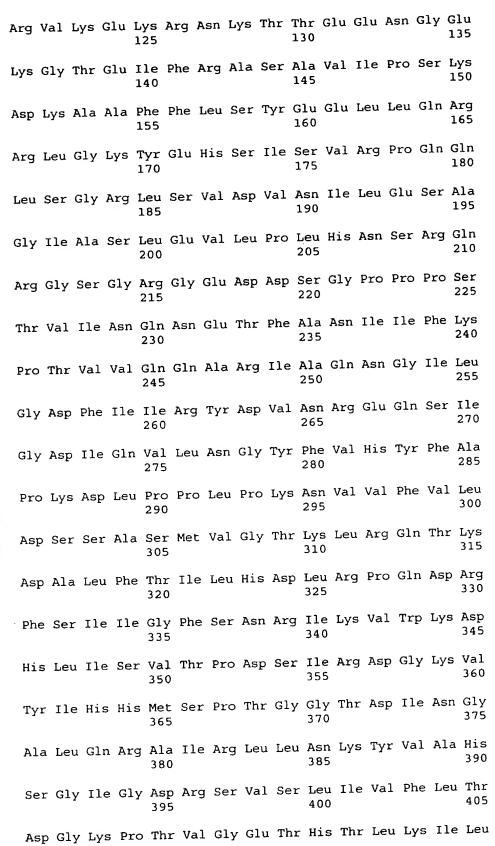
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Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys 95

Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp 115 110



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Thi	r Pr	o Ph	e Th	r Se 62	r Me	t Lys	s Le	u Ar	g G1 62	y Pro	o Vai	l Pro	o Ar	g Met 630
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Gl	u Pr	o Va	ıl Va	1 Gl 65	n Se 0	r Va	l Ar	g Gl	y Al 65	a Gl	y Th	r Gl	n Pr	o Gly 660
Pr	o Le	u Le	eu Ly	rs Ly 66	s Pr	o As	n Se	r Va	1 Ly 67	s Ly	s Ly	s Gl	n As	n Lys 675
Th	r Ly	rs L}	/s Ar	g Hi 68		y Ar	g As	sp Gl	y Va 68	1 Ph	e Pr	o Le	u Hi	s His 690
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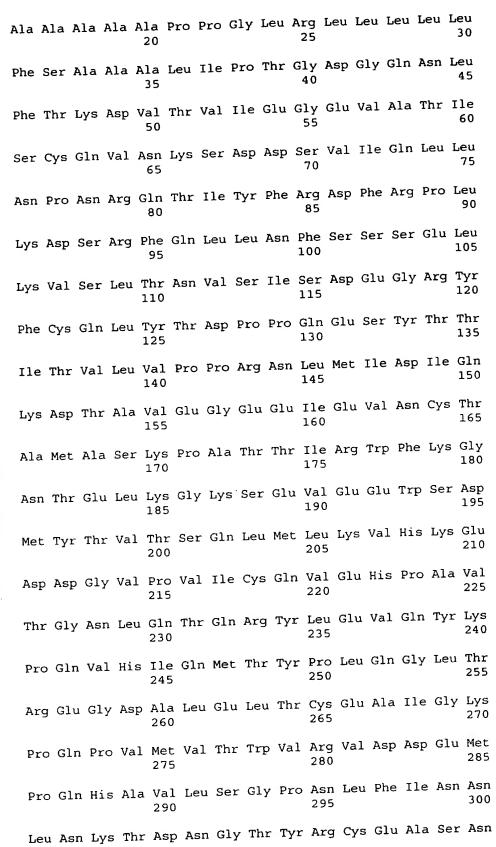
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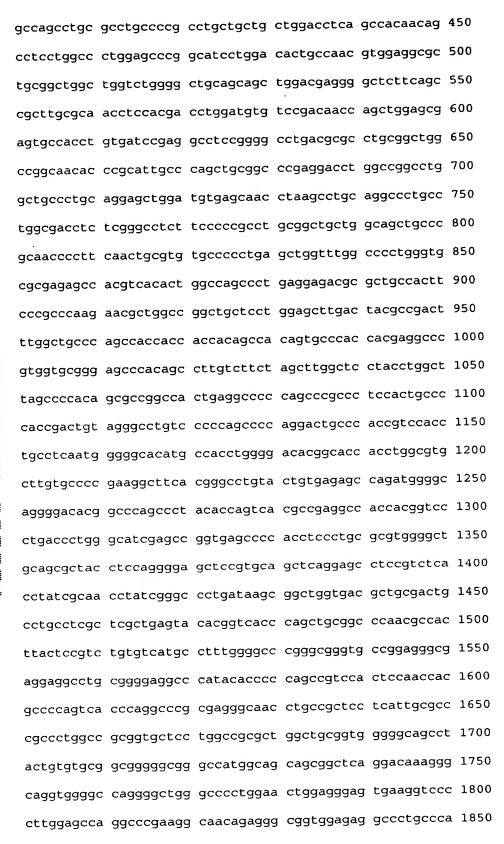
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	Ile Ile Leu Gly	Arg Tyr Ph 395	e Ala Arg His 400	Lys Gly Thr	Tyr Phe 405								
	Thr His Glu Ala	Lys Gly Al 410	a Asp Asp Ala 415	Ala Asp Ala	Asp Thr 420								
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<213> Homo Sapien

<400> 69

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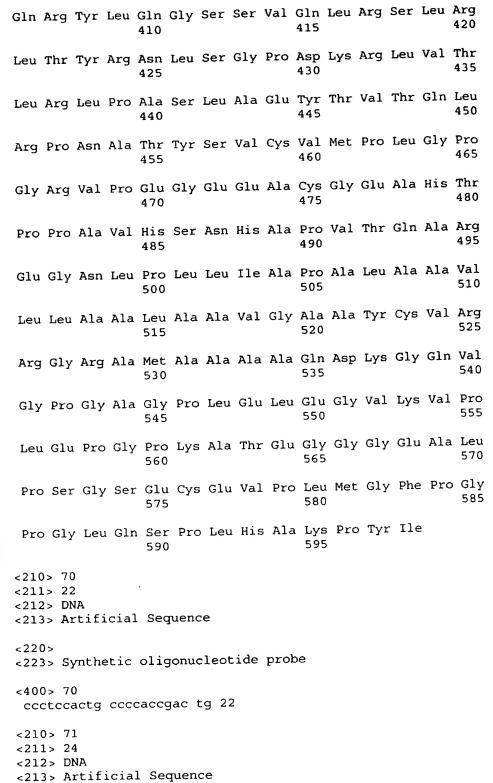
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Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

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Leu	Phe	Ser	Arg	Leu 140	Arg	Asn	Leu	His	Asp 145	Leu	Asp	Val	Ser	Asp 150
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Pro	Gl:	n As	р Су	s Pro		o Se	r Th	r Cy	s Lei 34	u Ası O	n Gly	y Gl	y Thi	Cys 345
His	s Le	u Gl	y Th	r Ar		s Hi	s Le	u Al	a Cy 35	s Le	u Cys	s Pro	o Glu	1 Gly 360
Phe	e Th	r Gl	y Le	u Ty 36	r Cy 5	s Gl	u Se	r Gl	n Me 37	t Gl	y Gl	n Gl	y Thi	r Arg 375
Pro	o Se	r Pr	o Th	r Pr 38		l Th	r Pr	o Ar	g Pr 38	o Pr 5	o Ar	g Se	r Le	u Thr 390
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gi Ti

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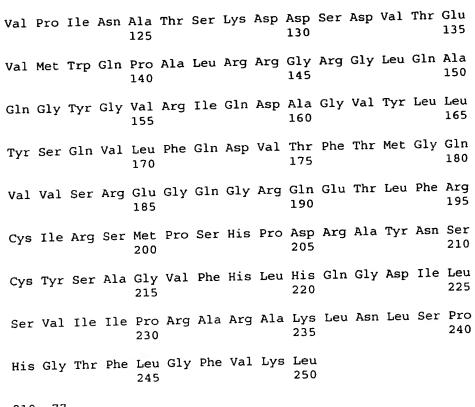
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<210> 77

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<212> DNA

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COOFWEET COUNCIL

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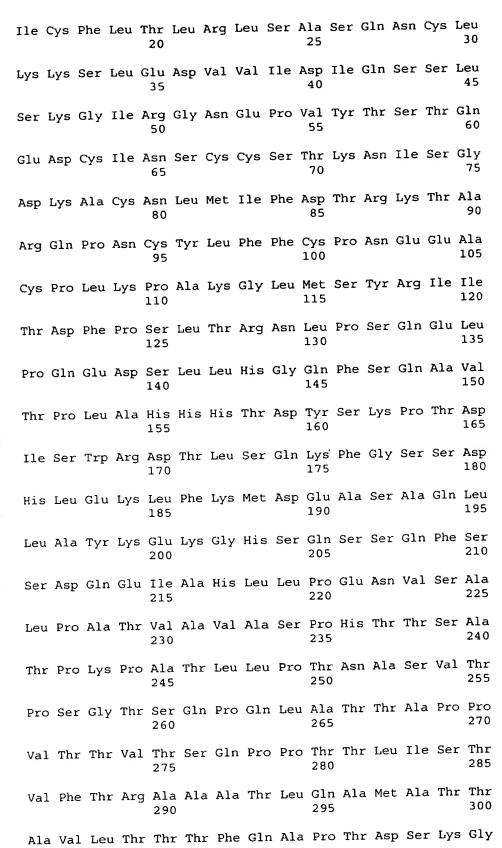
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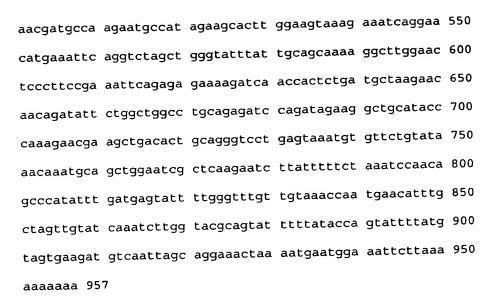
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Tyr Arg Leu Leu Ser Gly Gly Gly Arg Ser Lys Tyr Ala Lys Ile

Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val

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Leu Phe Met Val Thr Tyr Asp Asp Gly Ser Thr Arg Leu Asn Asn 165 160

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